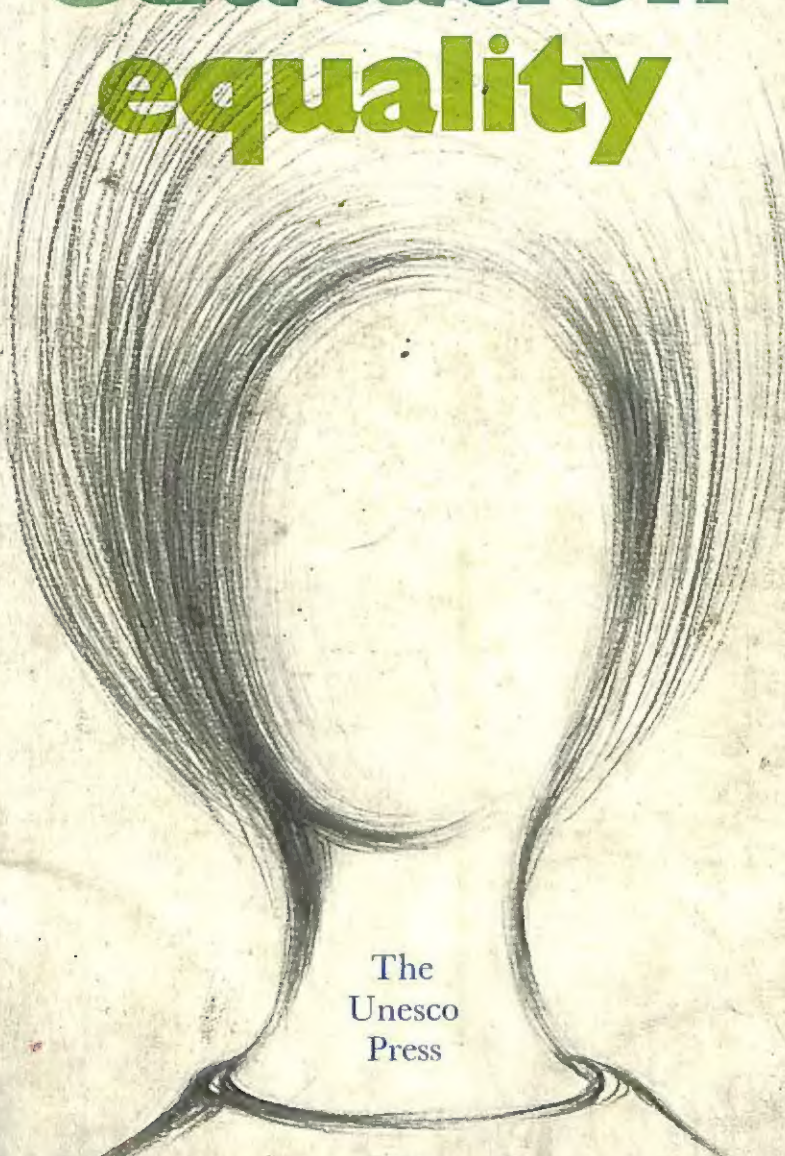


Women education equality



The
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Women, education, equality:
 a decade
 of experiment

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*a decade
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The Unesco Press
Paris 1975

S.C.E.R.T., West Bengal

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Preface

In 1965, the United Nations embarked upon a long-term programme to improve the status of women in all fields. Over the years much has been accomplished although much remains to be done. In declaring 1975 International Women's Year, the General Assembly of the United Nations created the occasion for all organizations, governments and individuals concerned to take stock of what has so far been achieved and to determine future directions of policy and action.

The present brochure forms one of Unesco's contributions to this stock-taking exercise. As a direct consequence of the United Nations programme, Unesco during the last decade has undertaken a number of activities for the promotion of women in its special fields of competence. Within the framework of its own long-term programme to create equal educational opportunities for women, the Organization has sponsored experimental projects in Upper Volta, Nepal and Chile. These three projects, along with various other advisory and assistance activities engaged in at the request of Member States, have provided the indispensable concomitant to general policy formulation with

regard to improving the status of women and the more theoretical aspects of Unesco's work. The review and analysis of the three projects presented in the following pages is intended to place at the disposal of an international audience information from which guidelines for innovation in similar contexts might be developed while at the same time provoking reflection on future modes of action. It is addressed not just to those determining educational and development policy, but above all to the general public without whose full support there is little hope for broadening the educational opportunities available to girls and women.

The Unesco National Commissions of Upper Volta, Nepal and Chile prepared reports and evaluations of their respective projects especially for this publication.

On the basis of this material, the present study was prepared by a consultant, Mary Ann Calkins Pilain, who in this capacity over the past few years has engaged in research and writing for Unesco, particularly in the field of technical education.

The views expressed and the interpretation of the material do not necessarily reflect the opinion of Unesco, nor do they imply the expression of any opinion whatsoever on the part of the Secretariat concerning the legal status of any country or territory, or its authorities, or concerning the delimitation of the frontiers of any country or territory.

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Introduction

Inequalities, blatant or subtle, still characterize the position of women in most societies despite the strides made towards improving their status in recent decades. International Women's Year, 1975, provides an opportune occasion to reflect on the achievements and failures of the past and on future possibilities for positive action to ensure full equality between men and women. Unesco, along with other organizations of the United Nations system and individual Member States, is currently reviewing its own policies and activities in order to determine what it can do to promote more effectively the advancement of women and their full participation in development.

The mention of Unesco often conjures up an image of a 'think tank' concerned with promoting new scientific, educational and cultural ideas through research and publications, seminars and symposia, and providing technical assistance via the higher echelons of government in Member States. The practical activities which it supports in villages, small towns and educational institutions throughout the world are frequently forgotten. Yet it is by these activities that Unesco will either

encourage real change in a positive sense or leave a record of well-intentioned but irrelevant efforts.

In the course of the past decade, Unesco has placed increasing priority on ensuring equal educational opportunities for women. To be sure, the Organization has sponsored research into the various obstacles hindering the equal access of women to all types and levels of education, and has sponsored or participated in numerous meetings and conferences dealing with this problem. The less widely known operational activities for opening up new educational opportunities to girls and women and encouraging them to take advantage of these are far from being a minor adjunct to the programme.

The present brochure is intended to inform the general public of aspects of Unesco's operational activities on the occasion of International Women's Year. Three experimental projects demonstrate possible ways of integrating women into development through the channel of education. The results of these experiments in equality permit a preliminary evaluation of the strengths and weaknesses of the approaches so far tested which may in turn open perspectives on future action in other contexts.

Throughout its history, Unesco has promoted equal opportunities for all in the fields of education, science and culture. In 1966, however, in response to a growing concern among Member States, as expressed in resolutions and recommendations of the United Nations, and in particular the Commission on the Status of Women, the Organization embarked upon a long-term programme

directed specifically at removing inequalities affecting girls and women in the field of education. Notwithstanding changes in laws ensuring the equal rights of women, full equality among men and women in the field of education, as in so many others, had yet to be achieved in practice.

In the course of the last decade, as Unesco gained more experience in promoting the advancement of women through education, it became aware of the numerous and complex ramifications of such action. Initially, its efforts were directed primarily to finding means of ensuring equal access of girls to educational facilities, that is, to increasing the participation rate of girls. It became evident, however, that an effective programme promoting the full integration of women into social and economic development required a broader approach aimed at opening up all educational opportunities to women and encouraging them to take advantage of these.

Recently, the programme has become increasingly concerned with promoting equal educational and training opportunities leading to related employment. On the basis of the findings and recommendations of an investigation (sponsored jointly with the International Labour Organisation (ILO)) into the relationship existing between educational and employment opportunities open to girls and women in five countries—Argentina, the Ivory Coast, Lebanon, Sierra Leone and Sri Lanka—and carried out by the respective Unesco National Commissions, new operational projects are planned. Thus, over the years, Unesco has reoriented its programme along broader lines and

the General Conference in 1972 formally recognized the change by amending the title of the programme to 'Equality of Educational Opportunity for Girls and Women'.

The three experimental projects initiated in the late sixties as an integral part of this more comprehensive programme illustrate the major thrusts of Unesco's operational activities. The projects, undertaken in Upper Volta, Nepal and Chile, have either been completed or are nearing completion. Though conceived in the same general framework of promoting equal educational opportunities for women and their integration into development, each aimed at objectives specific to the needs of the country concerned. In Upper Volta, the project has concentrated on creating the basic preconditions for educating women in isolated rural areas, and on designing education programmes which contribute to rural development. The Nepalese project has centred on training women teachers for rural primary schools as a means of increasing girls' enrolment. The project in Chile was directed to enrolling women in secondary technical education preparing them for employment in the modern sector.

The projects, implemented in countries situated in different regions, possessing very different cultural traditions and at various levels of development, taken as a whole shed light on some of the basic problems involved in promoting equal educational opportunities for women and their participation in development. These problems fall into three broad categories. First, negative attitudes on the part of men and women towards women's education which form the greatest barrier to equality

of educational opportunity. Secondly, the fact that education has often not only been irrelevant to development needs but has also failed to prepare women for participation in the development process. Finally, the penury of trained women to act as agents of educational change—teachers, instructors, community workers—and as examples to other women of how they may participate in change through education. The three experimental projects, each in a particular way, point to possible approaches which may be adopted for the solution of these problems.

This brochure considers the three projects both descriptively and analytically. The first part deals with the origins, major objectives and implementation of each. The second part is devoted to an analysis of the experience acquired in the projects in relation to the three major problem areas listed above. The brochure is intended to inform and to provoke reflection on possible forms of effective action, applicable in other contexts, to promote equality of educational opportunity for women.

Part I Three experimental projects

Upper Volta: *Education for rural women*¹

During the decade of the sixties, Upper Volta undertook a reform designed to adapt education to the numerous and complex development needs of the country. The enterprise was ambitious. The overwhelming majority of the population—95 per cent—live in isolated rural areas and have as their primary concern sheer survival. With only 10 per cent of the total age group enrolled in primary schools, and 5,000 of 7,000 villages lacking school facilities, the major problem facing the government was to establish the preconditions for generalizing basic education. In this perspective, priority was given to education for community, social and economic development, with particular emphasis on adult education in rural areas, and on very basic practical education directed to improving standards of living.

The educational prospects of girls and women in Upper Volta are more limited than those of the

1. This chapter is based on the report provided by the Upper Volta National Commission for Unesco, *Projet Expérimental: Égalité d'Accès des Femmes et des Jeunes Filles à l'Éducation*, Ouagadougou, May 1974.

population as a whole and the situation of women in rural areas is especially critical. Prevented in many regions by tradition, and in all regions by grinding agricultural and domestic tasks, from receiving adequate education, the rural girls and women of Upper Volta form the largest and most disadvantaged group of the population. Its expressed desire to participate in the Unesco experimental programme for equality of access of girls and women to education was an indication of the government's deep concern with this group and since 1967 it has made a determined effort to ameliorate the situation.

OBJECTIVES

The agreement signed by Unesco and the Government of Upper Volta in 1968 outlined a broad and many-faceted programme of ten years' duration. The plan of operation provided for implementation of the project in several pilot regions with a view to eventual extension throughout the country. Given the complexity of the problem of opening new educational opportunities to girls and women, especially in the rural areas, numerous activities were foreseen. Sociological studies of the pilot regions were planned in order to determine the exact position of women in rural society and the obstacles to their access to education. An adult literacy programme adapted to the needs and interests of rural women was to be developed and appropriate teaching materials designed and produced. Emphasis was to be given to basic technical education both informally in the villages and within school cur-

ricula so that adult women might improve the standard of living of their families and girls in school be better prepared for the future. The project was also to undertake the training of teachers, instructors and feminine leadership in the villages so as to provide the necessary staff to carry out the programme. Unesco was to be responsible for providing the services of experts in a number of fields—technical education for women, production of audio-visual aids, literacy, sociology—and financing equipment and training courses as well as various types of fellowship. The Government of Upper Volta was to provide the necessary physical facilities and specialized staff. The government was also to make available the information and documentation at its disposal as well as the country's research facilities.

The duration and the varied activities of the project have necessitated financing from a number of sources. Unesco has contributed from its regular programme funds. In the final phase, UNDP has been a major source of funds. Other international organizations have contributed, as have various bilateral aid programmes and non-governmental organizations.

ORGANIZATION

Although the project is being implemented under the aegis of the Ministry of Education, it was apparent from the earliest stages that the close collaboration of a number of other services and agencies was required. The project has been steered by a central committee composed of representatives of the various interested parties, namely the Secretary of the

National Commission for Unesco, representatives from the ministries of education, health, social affairs and finance and commerce, the directors or representatives of the rural development and primary education sectors, the project's chief technical adviser and the national co-ordinator, a woman jurist and a representative of the women's organizations of Upper Volta. As the need has arisen, various lines of co-operation have been established with other ministries and government services, as well as with private and bilateral aid organizations and other international agencies, in particular ILO and the Food and Agriculture Organization (FAO).

Basic administrative structures for the execution of the project have been developed and are at present undergoing appropriate adaptation. A national co-ordinating team, headed by the national co-ordinator, is responsible for formulating, programming and co-ordinating project activities on the national level, in close co-operation with regional teams and national and international specialists. It is composed of qualified secondary and primary school teachers who have received further training under the project in the areas of project activities. The regional teams, composed of five or six units and similarly trained and recruited, are responsible for leading and directing the personnel working in the villages, including instructors, village leaders, literacy workers, and midwives recruited locally.

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IMPLEMENTATION

In 1967, prior to the signing of the plan of operations, a background investigation of the situation of rural women was undertaken to determine appropriate modes of action and to designate the pilot regions. The sociological study was carried out through contacts with representatives from various sectors of the population in district capitals and through visits to representative villages. In addition to gathering information, the mission, composed of the Unesco expert and staff provided by the government, used this opportunity to gather support for the project and to inform the various local authorities and groups of the activities of Unesco in general and the goals of the project in particular. The survey provided an over-all view of the situation of women in a specific traditional agrarian economy. In Upper Volta the women are the backbone of this economy: they cultivate the fields, either their husbands' or their own, produce goods necessary for the family, sell any excess produce or wares in the local markets and are, of course, responsible for all domestic work—the care and raising of children, milling grain, food preparation, water carrying and wood gathering. Although in many areas the land is cultivated primarily by women, most are ignorant of modern agricultural methods. Extremely low income, the lack of free time, as well as the persistence of traditions defining and limiting the role of women all contribute to the dimensions of the problem. Most serious, however, of all the difficulties faced by village women is the prevalence of disease and the



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high infant mortality rate due to lack of sanitation and knowledge of basic hygiene and nutrition. The background survey resulted in a postponement of the literacy programme until measures alleviating the physical burdens of rural women could be taken and educational programmes in health, hygiene and nutrition developed. As a further consequence of the survey, three pilot zones were chosen for implementation of the project: Kongoussi, Banfora and Pô.

Kongoussi

The project was first implemented in Kongoussi—a zone where village society is organized along patriarchal lines so that women have a very low status in the community. As a result of a 1969 sociological study, a plan was worked out to implement the project in two phases: a preparatory phase consisting of an information campaign to increase receptiveness to the project among village men and women accompanied by a programme of practical community development activities, and a second phase devoted to implementation of a literacy programme.

In the first phase, the project concentrated on activities designed to resolve the basic problems of village women through material aid and informal education for improving health and living conditions. Carrying water and wood from the source of supply to the village and grinding the grains which form the staple diet are among the most laborious tasks devolving upon the village women. In the villages participating in the project,

wells were dug nearby, carts and donkeys were provided for carrying water and wood, and mechanical mills were installed for grinding grain. Health and hygiene education was a major element of the programme. In some villages maternity centres were established, traditional midwives were trained in special classes in the proper handling and care of new-born children, and village women were initiated into the elements of better child care. The importance of sanitation was emphasized and facilities installed. In informal classes, women were taught how to manufacture water filters to prevent contamination of drinking water as well as techniques for improving the family diet and housekeeping methods. The programme included an introduction to methods for the better utilization of available resources, saving and establishing new sources of revenue, and instruction in improved gardening and poultry-raising techniques, sewing and traditional handicrafts. Encouraged to clear and cultivate co-operative fields under the direction of instructors, the women became involved in a concrete experience of community work, at the same time learning the proper uses of fertilizers, good handling of seed, the advantages of row planting and better methods of storing the harvest. Radios were provided and village listening groups formed to listen to and discuss local language broadcasts designed to reinforce the community education programmes.

During the preparatory phase of the project, the community education programme was implemented in fifteen villages. The approach used was the same in all cases. As a first step, the village

as a whole was made aware of the extent of the problems and how the community, acting together, might solve them and, after enlisting the men's co-operation, specific activities were organized for the women. In some of the villages the men took responsibility for digging wells or for constructing a building for the community education and nursing classes. After acceptance of the project in the villages, the women elected representatives to follow brief courses of three to four weeks' duration for the training of village leaders and the improvement of village midwives' techniques. These courses included elements of civic education centred on the development needs of the country and the rights and responsibilities of women in this process, approaches to improving health and sanitation, family and social education, an introduction to better agricultural techniques and practical training in manual work and village crafts. On returning to their villages, the women then became the major channel for implementing the project by transmitting the knowledge they had acquired to their neighbours and aiding instructors sent out to the villages to conduct the informal education classes.

In 1970, the international experts and their counterparts began developing a literacy programme relevant to the needs and experience of rural women. Teaching material was developed in the language of the region, Mooré, which up to that time remained unwritten, and was designed to be used in a work unit on a particular subject. For example, a unit organized on the theme 'making a water filter' includes practical training in how to make a water filter, a discussion on the

subject, reading from illustrated sheets designed around one or two key words, writing the new words and doing simple arithmetic concerning quantities of filtered water. The first functional literacy classes were begun in early 1970.

Banfora

Implementation of the project in the second pilot zone, Banfora, began in 1970. The sociological study carried out in this region revealed that the obstacles to increased educational opportunities for rural women were much the same as those found in Kongoussi. There were, however, certain differences. For instance, the rural women of Banfora may own their own property which is not the case of their sisters in Kongoussi. Also, because of favourable climatic conditions, the zone is more prosperous. The situation is, however, complicated by the existence of numerous ethnic and linguistic groups, although Dioula is widespread as a vehicular language. In early 1974 the first functional literacy classes were opened.

The approach used in Banfora was broadly the same as in Kongoussi, although, again, there were some differences. In the first years of the project in Kongoussi, voluntary instructors were used for both the informal village classes and the literacy programme. This approach proved unsuccessful as voluntary staff, though enthusiastic, had limited means of earning a living and were unable to assure a sustained and continuous programme without remuneration for their work. Implementation of the programme in the Banfora zone was

carried out in co-operation with the Organization for Rural Development (ORD), a government agency. The ORD integrated instructors trained under the project into its staff. With professional staff, though in insufficient numbers, the effectiveness of the project has been increased. At present ORD instructors have been trained as both literacy teachers and community educators and placed in villages in all three pilot zones. The programme for village midwives was given in the maternity clinic in the town of Banfora where participants could observe professional staff and be taught by them.

Pô

When the project was extended to the Pô region in 1972 the path was much smoother for several reasons. Those implementing the project were able to profit by the experience gained in Kongoussi and Banfora and avoid certain mistakes which had been made. Secondly, Pô is in many respects a more developed region in which women enjoy a higher status, speaking freely in community affairs and possessing the right to marry as they please. Thus the process of gaining support among the women for the project was far less complex than in the first two pilot zones. Furthermore, the approach taken in Pô was slightly different. The sociological survey was undertaken concomitantly with implementation of the project rather than prior to it. After the usual contacts with local authorities and village chiefs, discussions were immediately initiated with the women. In some vil-

lages a Unesco committee was formed, with elected officers, to support the work of the project.

The training of women village leaders began in May 1972 with participants from twenty villages. During the course these leaders also participated in defining specific objectives of the two-year pre-literacy programme for the Pô region. These included: construction of an adult education centre in each village, exploitation of a common field, installation of water filters and latrines, installation and putting into operation of co-operative equipment—a mechanical mill, a radio, a cart—further training of village midwives, improvement of diet, and development of practical work and village crafts through technical instruction. The positions of influence held by these women leaders in their communities and the fact that at this point they could be seconded by resident instructors trained under the project, have rendered implementation of the community development programme considerably more effective in Pô. The development of a literacy programme for the zone has also been facilitated by the widespread usage of the Kassena language of which a written form already exists. The literacy programme is scheduled to begin in the course of 1975.

STAFF TRAINING

From its inception, one of the major concerns of the project has been to train the staff required on all levels, national, regional and local, for its implementation and eventual extension. In addition to the training courses for village leaders, midwives

and instructors already described, special training programmes for those selected to serve on the central and regional teams have been developed. These teams were recruited from among qualified teachers of primary and secondary level. The teachers had, however, been trained in the methods used in formal education programmes. Through fellowships for study abroad and training courses at home this staff has been prepared to work in the fields of women's education and rural community education, audio-visual aids, adult literacy, women's technical education and administration.

OBSTACLES

The education of women for rural and community development—the major thrust of the project—has encountered a number of difficulties. Certain basic conditions have hindered full implementation. Poor transportation and communication facilities have limited contacts with the villages, as well as slowing the arrival or repair of basic equipment. The lack of water in many areas of the country has prevented the installation in some villages of a clean water supply. The lack of properly trained instructors for the literacy and community development programme has also proved a serious stumbling block. The present approach, which consists of training instructors under the project who are then placed on the staff of the ORDs and who reside in the villages, promises to be a feasible solution. The literacy programme has also taken root more slowly than expected because the period

of five months per year in which classes may be held is not sufficient to render an illiterate person literate within two years. Furthermore, by 1974 it had become evident that, to be effective, the literacy programme must be addressed to the men of the village as well as the women—if the men remain illiterate they will not encourage their wives and daughters to take advantage of opportunities which they themselves do not enjoy. These problems were brought out in the 1974 evaluation of the project made by a tripartite commission (the government, United Nations Development Programme (UNDP) and Unesco) and as a result, in its final phase, the project is being reoriented so as to direct the literacy and civic education programme to the village community as a whole.

EDUCATION IN THE SCHOOLS

The second major aspect of the project concerns improvement of the education received by girls in the schools so as to encourage their enrolment and attenuate their extremely high drop-out rate. In an attempt to render education more relevant to girls' future roles, the project has designed programmes of home economics at all levels. Programmes for the primary schools and two-year post-primary sections include a large component of practical work in gardening, sewing, health and nutrition, child care, housekeeping, etc. A complete training programme in home economics has been introduced at the secondary level in four secondary girls' schools. In secondary technical-vocational education addressed to rural areas, a

programme leading to pedagogical qualifications in family and agricultural studies has been instituted to train girls for positions as instructors for rural development. In-service and pre-service teacher training programmes have been organized to implement these reforms. A speciality in domestic science and agriculture is now offered at the institution which prepares primary teachers for rural schools. In-service courses have been organized for practising teachers so that they may introduce the new programme to their classes. For those completing secondary education with a speciality in domestic science, a special period of practice teaching has been organized in the four girls' secondary schools where the experimental programme was introduced.

From the beginning, the project has been concerned with introducing elements of basic vocational education not only in the community development programmes but also in the schools. The practical component of education has been underlined both to improve the quality of life and to increase women's contribution to family revenue. The project also undertook a study of vocational training and employment opportunities for women in Upper Volta. The results, however, were rather discouraging: it was found that, outside teaching and the civil service, the domestic science training programme did not lead to employment. Not only was the vocational education received by most girls inappropriate but employers expressed unwillingness to hire girls even if they had received suitable training. The only real opportunities for those with secondary vocational

training were to be found in work as instructors with the ORDs.

The multiform character of the experimental project in Upper Volta rendered uneven progress virtually inevitable. The project has, however, despite the numerous difficulties encountered, been highly successful in certain respects. Its major accomplishment has been to heighten awareness of the necessity for the full participation of women in the development of the country and of the importance of education at all levels in achieving this. The project has on the whole been very well received by the local authorities and the men and women of the villages. As the experimental phase draws to an end, this widespread acceptance of the project's aims and methods, in conjunction with the structures now in place for co-operation among the numerous government services and agencies concerned, promises well for the future.

While the project has been successful in human terms, the material difficulties have proved a major obstacle to its full implementation. Mechanical difficulties with the mills and radios installed in the villages, the fact that in Banfora the donkeys provided to pull carts are liable to a fatal disease, the penury of building in the villages, the lack of equipment for classrooms and laboratories in schools offering domestic science programmes, the lack of facilities for the production and distribution of materials for the literacy programmes or appropriate materials for the newly literate, are but a few examples of the problems encountered.

A real beginning has been made to achieve the

underlying goal—the changing of attitudes towards the role of women in the community and their education. The educational programmes for community development directed to women have made a definite impact. With the reorientation of the literacy programme to reach the whole community, there is hope for further considerable progress. While continuing to develop domestic science programmes for girls in the schools and to train teachers and instructors in this field, a greater effort is now planned to ensure the equal access of girls to vocational and technical education which will prepare them for employment.

On the basis of the results already obtained, the gradual extension of the project throughout the country seems feasible. The experience of Upper Volta demonstrates workable approaches for improving the condition and education of girls and women in a situation where nature, tradition and the general standard of living are hostile forces impeding educational development.

Nepal: *Training* *women primary school* *teachers*¹

Although Nepal made substantial progress in expanding its education system throughout the sixties, at the end of the decade the government embarked on a comprehensive educational reform designed to further expansion and to align the content of education with development needs. This new policy required concentration on the problems of isolated rural areas and the various disadvantaged groups in Nepalese society as well as on education for rural development.

In the framework of the reform, the government placed equal educational opportunities for girls and women, with special emphasis on primary education and literacy, among the top educational priorities and, in accordance with this policy, asked that Nepal should participate in the Unesco experimental programme promoting equal access of women and girls to education.

Although Nepalese women and girls enjoy equal

1. This chapter is based on the report prepared by the Nepal National Commission for Unesco especially for the present publication: Deli Raj Uprety and N. R. Padye, 'Experimental Project for the Access of Girls and Women to Education'.

rights before the law and equal educational opportunities, the high rate of illiteracy among girls and women and the extremely low percentage of girls enrolled in school remain major obstacles to development. Certain figures illustrate the bleak situation at the beginning of the seventies. In 1971, only 13.9 per cent of the total population was literate and of this fraction only 3.9 per cent were women. Thus, at that time 96 per cent of Nepalese women were classified as illiterates. Rural girls and women suffer from the dual disability of lack of educational opportunities for rural areas as a whole and an even greater lack of opportunities for girls and women.

OBJECTIVES AND ORGANIZATION

With the signing of the agreement to participate in the experimental project, Nepal embarked upon a full-fledged campaign to remove the barriers impeding women's participation in development by an attack on the fundamental problem of primary education for girls through increasing the number of women in the teaching profession. On the basis of this general aim, the project was designed to achieve certain particular objectives. It was limited in its initial stages to one pilot area, the Gandaki zone. In this area in 1968, girls enrolled in primary schools represented 13 per cent of the total school population; the target of 40 per cent was set for 1975, at the termination of the project. Facilities for the training of women teachers and upgrading of practising teachers were to be made available at the Pokhara Normal School (now the Institute of

Education, Pokhara campus), a co-educational teacher training institution. A study was to be made of the factors hindering the access of girls and women to education in the area and of possible ways of removing such obstacles. The project was also directed to improving primary school teacher training curricula in order to relate the content of education more specifically to development needs. It was further designed to encourage women in Gandaki to enter the teaching profession and to find ways of ensuring their employment after completing training at Pokhara. With a view to the possible future impact of the project, two other objectives were included in the plan of operations: *the extension of the project to the whole country at the end of the experimental period on the basis of an evaluation of results, and the provision of data and information which might be useful to other countries facing similar problems.*

The plan of operations for the project further delineated the respective responsibilities of the government and Unesco. Under its Regular Programme and with the financial support of the United Nations Development Fund, Unesco has provided the services of an expert in primary teacher training as well as a sociologist responsible for a survey of the pilot area to determine hindrances to the equal access of girls and women to education. Fellowships have been awarded under the project both for trainees in the programme and for teacher educators. The Government of Nepal has made available the specialized personnel needed for implementation of the project, has given priority to the employment of teachers trained under the project

and has provided necessary equipment and physical facilities. The government also agreed to refer to the project in the fourth five-year plan as part of the over-all education plan for social development. Although this was not specified in the original plan of operations, Unicef has provided funds for the renting of the necessary physical facilities for women teacher trainees and has awarded a grant towards construction of a permanent hostel for women students at the Institute of Education, Pokhara campus.

SOCIOLOGICAL SURVEYS

In the course of the project two sociological studies carried out in the pilot area have proved essential to its implementation. The first study, a survey of three villages in the Kaski District surrounding the town of Pokhara, made at the end of 1970, illuminated the nature of the problems faced in educating Nepalese women from rural areas. The economy of the villages and the lives of their inhabitants revolve around agriculture. If the children are sent to school, by the age of 10 they usually drop out in order to contribute to the family's livelihood. It is not easy for village girls to obtain even this basic education since from a very early age they are expected to help with household chores from which their brothers are exempt. Should rural girls complete their primary education, continuation in post-primary schools is very difficult indeed. Not only does primary education entail expenses considered by most village families as useless for girls even if they can be met, which is not often the case, but

one post-primary school serves a number of villages. Thus the remoteness of the villages involves families in further financial sacrifice while many are not willing to send young girls so far away from home.

The survey found that, apart from children's work in agricultural communities and the high cost of education, the nature of traditional habits and attitudes forms the greatest barrier to equal access to education for girls. Although the extent to which women enjoy equality of status varies from village to village and among caste-ethnic groups, women are expected to perform their traditional functions as wives and mothers and, for the most part, girls are prepared for these roles only. The persistence of traditional ways of thinking has meant that not only is the education of girls viewed with suspicion, and in extreme cases considered immoral, but from a utilitarian standpoint is considered useless and irrelevant to the roles women are expected to play.

On the basis of the data obtained, the researchers recommended certain approaches to the problem of razing the barriers to girls' education in rural areas. In the first place they recommended that the fourth and fifth grades be added to village primary schools with a view to increasing enrolment as a whole and to equalizing opportunities for girls to complete their primary education. Secondly, more provision for boarding facilities should be made to attract girls to the secondary schools in greater numbers. The survey stressed the necessity for approaching all educational innovation through the channel of the local government authority, the Panchayat and its chief, which for the villagers represents not only legal authority but also a major

source of wisdom and knowledge. The researchers also emphasized the real need for closely linking the school to the community and its primary concerns by introducing agricultural studies as an integral part of the curriculum and by associating the school with adult literacy and community development activities. With respect to women's participation in rural development, the survey recommended encouragement of the training activities organized by the Nepal Womens' Organization, arguing that new ideas could effectively be introduced through this medium and citing as evidence the contribution of Organization members in two villages who, though illiterates, have participated in community economic development projects.

The second sociological survey was carried out in 1972 by the Centre for Development and Administration, in the town of Pokhara. Taking a cross-section of the households in the town as a sample, the survey analysed the factors hindering access of girls and women to education in an urban context. On the whole, the enrolment rate for girls and the female literacy rate in Pokhara were much higher than the national average, highlighting the difference between rural and urban areas. Again it was found that the values of particular caste-ethnic groups and their attitudes to the role and status of women in general form the greatest single factor in determining whether or not girls from the groups are educated. The second major factor proved to be the degree of economic prosperity of the family. Given the relatively high cost of education, poorer families, even if willing, could not afford to send their girls to school. The

study concluded that equality of access of girls and women to education is interlocked with changes in prevailing cultural value systems and economic growth. Thus full equality of access will not be achieved in the near future since an educated populace is both a precondition and a consequence of development.

TRAINING PROGRAMMES

The results of these surveys have contributed in large measure to designing a project directed not only to primary teacher training but also to initiating changes in attitudes towards girls' education at the local level. In consequence, various types of courses and programmes have been developed. Three groups of women from the rural areas of the Gandaki zone and from several surrounding districts outside the zone have completed the primary teacher training course and a fourth group is in training. Several courses in community development have been offered to village women. One upgrading course has been organized to prepare girls without the necessary entry qualifications for enrolment in the primary teacher training programme, and refresher courses for practising teachers have also been arranged.

The women primary teacher trainees have all received their preparation in regular teacher training programmes. Despite the recruitment target of fifty trainees in 1971, only twenty-seven were enrolled as recruitment procedures were not yet firmly established. Of these, twenty-five completed their training. In subsequent years recruitment

quotas were nearly met and the drop-out rate has continued to be minimal. In 1973, the project was extended and facilities for women were made available in another zone at the Institute of Education, Dhankuta campus. It is planned to extend the project to a third site at Surkhet in 1975.

A great effort has been made to recruit girls from the rural areas for the teacher training programme although this has proved difficult for a number of reasons. It is rare to find girls outside the towns who have completed secondary education (ten years of schooling) and passed the School Leaving Examination and, indeed, it is rare to find girls with even eight years of schooling. Secondly, because of the isolation of many villages, information reaches potential candidates very slowly. The project has developed several promising approaches to overcome these difficulties although evaluation will not be possible until they have been more widely tested.

One approach entails sending recruitment teams to the more isolated areas to inform village leaders, potential candidates and their parents of the project and the opportunities offered to girls in the primary teacher training programme. Although in the last two years a number of candidates have been recruited in this way, the distance between villages and lack of transportation facilities necessitate far more personnel than is now available, nor are there yet enough funds to finance the effort on a larger scale. The second approach consists of enlarging the pool of potential candidates by providing courses to upgrade girls from rural areas who have not yet had the opportunity to complete

secondary schooling. The School Leaving Certificate (SLC) is now required of teacher training candidates although there has of necessity been some flexibility in recruiting for the primary teacher training programme under the project. In the first year, students followed courses preparing for the SLC examination concurrently with their teacher training programme. This has not proved a good solution, as programmes were overburdened and there was a conflict between the traditional teaching and learning methods required by the SLC programme and the more open methodology used in the teacher training programme. As a result, the scope of the project has been enlarged to promote upgrading courses for potential teachers, and one such course has been tried on an experimental basis. In 1973, a seven weeks' preparatory course was given to twenty-five girls with eighth and ninth grade passes who had been accepted for the 1973/74 teacher training programme. It is planned to give much more emphasis to such upgrading activities in the future either by organizing courses at the teacher training centres or, where this is not feasible, by organizing programmes for girls from rural areas at secondary schools serving a fairly large area which entails, of course, the provision of boarding facilities.

The teacher training component includes provision for fellowships for teacher trainees and teacher educators to study both at home and abroad. The purpose of the fellowships is to broaden the horizons of both the trainees and the instructors and to enable them to bring fresh ideas to their own work.

Though not specified in the original plan of operations, training women for community leadership and development has assumed an important role in the project. A special extracurricular course for the women primary teacher trainees, outside the regular co-educational curriculum, has been included in the programme since 1974. This course includes study and practical work in the field of health, nutrition, sanitation, child education, home and family life, and community development. Prior to the organization of the course, trainees were introduced to these subjects on a more informal basis through their activities at the women's student hostel. It is hoped that in the future the course will become a part of the regular teacher training curriculum so that women primary teachers in the rural areas will be better equipped to contribute to the over-all development of the communities in which they live and work. Several courses in community development for village women, recruited with the help of the Nepal Women's Organization with literacy as the only qualification, have also been organized at Pokhara. The courses offered in 1972, 1974 and 1975, in collaboration with the Ministry of Home and Panchayat, concern family health, village and family crafts, civics, and village development. In 1973, two special courses were organized to train adult literacy instructors. First priority was given to women primary school teachers and second priority to those with some experience in adult literacy courses. The purpose of all these special courses is to better prepare rural women for participation in the development of their communities

and also to help create an atmosphere in the villages favourable to the education of girls and women.

The provision of in-service training in the form of refresher courses for women primary teachers has recently got under way. In December 1974, at the same time as the course in community leadership for village women, a special refresher course was offered to thirty village teachers at the Pokhara campus, and a similar but shorter course at Dhankuta campus. In its later stages the project will give more emphasis to this activity.

BOARDING FACILITIES

The provision of adequate boarding facilities has from the beginning been one of the most important concerns of the project. Indeed without arrangements for such facilities a significant increase in the enrolment of women in teacher training programmes would come about very slowly and it would virtually be impossible to bring in candidates for training from rural areas. Throughout the initial phases of the project the women's hostel has been located in rented facilities. A permanent hostel at Pokhara is under construction and should be completed in the summer of 1975. Plans have been made to build a hostel at Dhankuta, as well as to construct boarding facilities at other campuses as the project is extended. The provision of adequate hostel facilities is a basic precondition for offering rural girls the opportunity to complete their secondary education away from home.

The concern is not merely to provide women

with a suitable place to live. The hostel at Pokhara (like those envisaged in other locations) serves an important function as a centre for social and cultural activities. As mentioned above, it is also a centre for extracurricular activities in health and family education and community development. The hostel at Pokhara has proved particularly important in helping young women from rural areas to gain in self-confidence through a shared group experience. And lastly, families are more willing to allow their daughters to leave the village if they are sure that they will be living in suitable conditions.

SUPPORTING AND FOLLOW-UP ACTIVITIES

Supporting and follow-up activities associated with the project, though diffuse, are of crucial importance to its success. In 1971, in the initial phase, an information campaign was carried out in the Gandaki zone to inform people of the objectives of the project and to encourage increased enrolment of girls in the primary schools as well as the recruitment of candidates for primary teacher training. The Unesco expert and the Nepalese liaison officer presented the objectives of the project at meetings and seminars for teachers, administrators and local Panchayats. Posters and pamphlets were distributed. Those in charge of the projects found that personal contact on the local level was one of the most effective means of gaining support for the project from parents, local government authorities and prospective teacher trainees. In the same year a radio campaign was begun and

use of the radio for informing the public has continued along with the distribution of written material. Incentives to schools showing increased enrolment of girls and recognition of the efforts of teachers in bringing this about have been provided in the form of prizes and awards financed by Unicef. The women's primary teacher training programme itself contains elements designed to prepare the future teachers to engage in supporting activities in their communities. The trainees design posters and brochures and are made aware of the importance of working with the village Panchayats and parents in order to accomplish the long-range goals.

Follow-up activities are essential to gauge the results of the project, to determine more effective approaches, and to reinforce what has been accomplished. These have included visits to schools by the project officer and the liaison officer where teachers trained under the project are teaching. From the beginning of the project, follow-up or refresher courses for the women trained in the programme have been foreseen, although, as noted, this activity has only recently got under way. The high value placed on follow-up activities of all sorts is demonstrated by the emphasis which both the national authorities and international personnel wish to give to these in the near future.

EVALUATION

A mid-term evaluation of the project was undertaken in 1973 by the Nepalese National Commission for Unesco. The results of this comprehensive survey were on the whole very promising

while at the same time showing clearly the extent of the problems still to be overcome. The survey found that in the districts studied there had been a significant increase in the participation rate of girls in primary schools, as much as 19 per cent in one district. The participation rate in the middle schools, however, only increased slightly and in some districts actually declined. In the selected primary schools studied in seven districts of the Gandaki zone, the average enrolment of girls was 24 per cent of the total, a significant improvement. Furthermore, the percentage of women teachers in the districts studied, though a small part of the total, has shown a steady increase and is higher than that in other districts. In terms of attitudes, the survey showed that villagers for the most part considered the education of boys to be more important than that of girls, that girls were encouraged to stay at home to help out with their younger brothers and sisters, and that girls' education was regarded as an unproductive investment. At the same time it was found that the villagers approved of the presence of women teachers and felt that they would do much to encourage the increased enrolment of girls. The investigators also found that the rudimentary nature of some of the physical facilities does not pose a major problem for girls' primary education, nor does distance from schools as the majority of the population is clustered in fair sized village districts.

On the basis of these findings, the investigators made several recommendations. It was suggested that the information campaign as to the advantages of educating women should be extended

and that greater efforts should be made by all concerned—teachers, supervisors—to make personal contact with the parents and guardians of village girls and to make the local Panchayats more responsive to the education of girls. The team further recommended that emphasis be given to including girls and women in adult literacy programmes. To significantly increase the number of women primary school teachers, it recommended that better co-ordination between the training of teachers and their employment be established through closer collaboration between the training centres and the district education offices and that a concerted effort be made to recruit girls from those areas where they would have the best opportunities for employment after completion of their training. The team also judged that priority should be given to programmes in secondary schools attached to teacher training centres which offer rural girls the opportunity to study up to School Leaving Certificate level in order to increase the number of potential teacher training candidates and to programmes upgrading trained teachers to this level. Adequate hostel facilities for both types of programme are, they pointed out, a precondition. They further recommended that specific incentives in the form of scholarships, fellowships and prizes be given to women primary teachers to encourage them to work for increased enrolment of girls. The survey team also made the recommendation that in the drive to make education compulsory and free, girls should be given priority and should be further aided by distribution of free textbooks.

In February 1975, one and a half years after the *evaluation* survey was undertaken, a meeting was held by the Government of Nepal, Unesco and UNDP, with Unicef participating, for a tripartite review of the project. The review committee positively assessed the results of the experiment and made a number of recommendations for its last stages and its possible continuation. It strongly recommended that the project be continued and included in the 1975-80 Country Programme and that application be made for other international funds to finance construction of hostel facilities. In the opinion of the committee, the project would be strengthened by greater emphasis on more effective recruitment of teacher trainees, more attention to providing opportunities for girls from rural areas to acquire the qualifications to enter teacher training, and provision on a regular basis in the teacher training centres for in-service, upgrading and refresher courses for practising teachers. Finally, the committee recommended that more attention be given to preparing future primary school teachers for their role as leaders in community development through courses integrated into the teacher training programme in nutrition and child education, health and sanitation and community development.

The experimental project in Nepal illustrates the difficulties of introducing universal primary education in countries with large rural populations and deeply ingrained traditions concerning the role of women and their education. It has concentrated on the fundamental issue of providing

girls with the opportunity to acquire a primary education. In directing the major effort to training women primary school teachers the project has provided Nepal with a number of women, even if so far very few, who will act as agents of change. They may also serve as examples encouraging young girls to take advantage of the opportunities now opening in order to become in turn active participants in the development process.

Chile: *Access of women to technical careers*¹

With a well-established system of public primary and secondary education and with virtually equal participation rates for girls and boys, Chile, at the end of the sixties, turned its attention to the question of adapting education to the needs of industrial and technological development. The government accordingly placed the reform and expansion of technical and vocational education high on its list of educational priorities. It was also quite clear that new policies were called for if girls and women were to benefit equally from this reform. Although girls made up 53 per cent of the secondary school enrolment, by far the vast majority were enrolled in academic programmes, neglecting the science and maths streams and, hence, the careers to which these studies might lead. The technical education readily available to them centred on the so-called feminine trades and professions, e.g. hairdressing, secretarial work, dress-making, social work. With

1. This chapter is based on the information provided by the Chilean National Commission for Unesco in the document prepared by Lucía García: *El Acceso de la Mujer a las Carreras Técnicas*, Santiago de Chile, 1974.

a view to promoting the full participation of women in the country's economic development, Chile asked to participate in the experimental programme sponsored by Unesco to achieve equality of access to education for girls and women.

OBJECTIVES

In 1968 the Government of Chile signed an agreement with Unesco to undertake an experimental project over a period of six years, to facilitate the access of girls and women to technical careers through technical education. The project, which terminated in 1974, was designed to create broader technical education opportunities for girls on an equal footing with boys. Furthermore, this education was directed to equipping girls, as well as boys, to continue higher scientific and technological studies if they so chose. In-depth studies were planned to analyse the demand for technically trained women and the obstacles to their employment. The experimental project was to be implemented through the organization of new technical education programmes in selected pilot schools.

Unesco agreed to contribute the services of technical education experts and an expert in social science as well as to furnish the equipment necessary for the project. It was also responsible for organizing a seminar during the first phase to examine the experimental project and its possible application to other countries in the region. In addition fellowships were provided for technical teachers to study abroad. The Government of Chile, for its part,

agreed to provide the necessary premises and staff for the project, and such equipment as was available in the country. Most important, the plan of operation provided for the establishment of a co-ordinating committee to ensure smooth lines of collaboration between the Unesco experts, the governmental authorities and Chilean industry. Another committee was formed to work out new technical education curricula and develop innovative teaching methods and materials.

BACKGROUND STUDIES

As an initial step toward implementation, studies were undertaken to analyse the situation of women in Chile with respect to their access to technical education and related careers, the results of which were presented at the regional expert seminar held at the end of 1969. The survey revealed that technical and vocational education was, as a whole, inadequate for the needs of the country. In the past, most skilled workers and middle-level technicians were trained on a more or less informal basis within industry. Technical and vocational education within the formal school system remained in a very weak state, and schools were poorly equipped and staffed. The education and training conducted in them was ill-adapted to occupational requirements and to the demands of the labour market. Thus, facilitating the access of girls to technical education had to go hand in hand with an effort to improve the quality of this education as a whole. Furthermore, the study showed that, although in theory girls could attend a number of

technical and vocational institutions, their numbers were negligible: in one industrial school of 700 students only four were girls. Co-education in schools preparing for employment in the modern sector, although admitted in principle, was simply not a reality.

IMPLEMENTATION

The project in Chile was specifically centred on improving the quality of technical and vocational education in general by adapting the curriculum of two pilot schools more closely to real economic needs and employment prospects and encouraging the enrolment of girls in the new programmes. Two recently built schools located in low-income areas of Santiago were chosen for the site of the project, thus enlarging employment opportunities for young people from disadvantaged backgrounds. The two schools were very different in character: the Technical School No. 6 of La Cisterna was originally a girls' technical school offering training in the traditional feminine trades, the industrial school at Renca had been an institution for boys offering training in mechanics. The project aimed to make both these schools fully co-educational and to offer new courses of study, gradually phasing out the old curriculum. Both schools require eight years' basic education for entry and offer courses of four years' duration composed of general studies and professional training leading to qualification as a middle-level technician. At Cisterna, four new specialities were added to the curriculum: chemistry, computer programming (from 1974 changed

to data processing), textiles and bilingual secretarial training. Under the project, chemistry and electronics were added to the specialities at Renca.

The basic principles of the new curricula introduced at La Cisterna and Renca are envisaged as a guide for the future development of the country's technical and vocational education. According to these principles, the development of technical and vocational education should be closely coordinated with the development of industry and the progress of scientific and technological research, as well as with national social and economic objectives. Technical and vocational education should be preceded by eight or nine years of basic general education. It should also serve a broader purpose than merely providing young people with the theoretical and practical training required for a particular job. It should offer a wider educational experience permitting personal development, and enhancing the capacity for self-expression, judgement, understanding and adaptation to new situations. Practical work, while assuming a larger place in the curriculum, should also serve broader educational objectives developing critical judgement and problem-solving abilities and promoting a spirit of inquiry. Technical and vocational education should in no way limit the possibilities of the student but, on the contrary, should be designed in such a way that all may develop their potential to its highest extent. Every effort should be made to ensure a smooth transition between school and active employment and, in this regard, special attention should be given to physical facilities—buildings and equipment—which, while designed for

educational purposes, should also to a great extent reflect the atmosphere and realities of the working world. Most important of all in the context of the project, since women should participate fully with men in the development of their country, they should be admitted on an equal footing with men to technical and vocational education preparing them for this task and should be actively encouraged to take advantage of these opportunities.

On the basis of these principles, the curricula and programmes designed for the project were aimed at training qualified and adaptable middle-level technicians who would not be at the mercy of technological change or changes in labour market demands.

Those responsible for the programme design in the pilot schools were faced with the task of devising a curriculum which would provide students with both the necessary breadth of education and the essential technical qualifications. It was decided to offer in the first three years a rather large general education component along with basic technical and scientific courses. Specialization is progressive and only in the last year is a highly specialized component offered. Practical experience throughout the programme of study in laboratories and workshops, an element previously neglected, receives special emphasis. After completing the course of study in the schools, students may be better prepared for the period of practical work in industry required before they are awarded full technician qualification.

THE PRACTICAL CURRICULUM COMPONENT

From the inception of the project, it was obvious that the goal of relating technical and vocational education more closely to the country's real development needs would never be achieved without a major change in the practical aspect of the training and education offered in the schools. In the past, the curriculum had been primarily geared to theoretical elements of little use to graduates seeking a place in the labour market or had been narrowly specialized, offering few possibilities for future advancement and no protection against technological change or changes in the demands of the market. Programmes had to be adapted to the requirements of future technicians as well as to the real needs, both short-term and long-term, of industry. Such adaptation required the establishment of close lines of co-operation between the pilot schools and industry, both for curriculum development and for student placement. The problem of strengthening the practical component of technical education was dealt with in four ways: inclusion of more relevant practical laboratory and workshop activities in the curriculum itself; revision of the required period of work in industry prior to full technical qualification; the further training and upgrading of teachers in the practical aspect of their special field; and the organization of formal co-operation between the pilot schools and industry through the agency of CORFO (Corporación de Fomento de la Producción), the autonomous state institution for promoting industrial development.

In 1972 an agreement was signed by the Ministry of Education and CORFO establishing the lines of co-operation for implementing the experimental project—a collaboration which has proved very fruitful. CORFO has arranged for students to visit various industries and do practical work both during the programme of study and after. It has provided much needed assistance in placing students in industry for the periods of practical work required for full qualification as well as in aiding former students to find appropriate employment. Follow-up activities to determine the attitude of employers towards the work of former students of the two pilot schools and in general to bring industrial employers into closer relation with the schools have also been undertaken by CORFO. These activities, together with aid in financing equipment of the schools, provide a valuable concrete example of how education and the world of work may be more closely related for the benefit of the individual and of over-all economic development.

The organization of a significant practical component in the technician training curriculum was hampered by a number of factors. Poorly equipped laboratories and workshops at both La Cisterna and Renca proved a major obstacle. As a result, throughout the project, as many funds as possible, both international and national, were directed to acquiring and installing the equipment necessary for training well-qualified technicians in the procedures and processes which they will use in the future. Indeed in 1974, at the termination of the project, some funds originally earmarked for other purposes were re-channelled into equipment.

In the last phase of the project, an attempt was made to design the practical component in such a way as to simulate real working conditions, thus giving students not only the necessary technical training but also an understanding of what they may expect in employment. Plans are under way to create productive workshops or production units attached to the pilot schools. In these shops, under the direction of qualified teachers, students will learn the techniques necessary for their chosen occupation and familiarize themselves with the appropriate equipment. In addition, the work done in these will be directed to a definite purpose—providing services or producing items which may then be sold to help finance and maintain equipment for the schools. There are a number of advantages to this plan. Not only will financial benefits be derived from the production units, but students will be closely involved in the production process rather than carrying out exercises which have little significance in the world of employment. On the other hand, there are certain dangers of which the proponents of this approach are well aware: the production units must be designed so that the fundamental pedagogical function does not become subordinate to the production function. By the time the project came to an end, several experiments had been undertaken at Renca with promising results, including the installation in 1974 of a shop for manufacturing electrical transformers as well as a mineral analysis laboratory serving the light mining industry. Concrete plans have been made for other units including a galvanoplastics shop planned in co-operation with CORFO which, in addition to

ensuring commercial contacts, providing technical data and making available its own experimental laboratory, may also be in a position to finance some of the basic equipment. Several similar possibilities are under study for implementation at La Cisterna in the textile, chemical and secretarial fields. At present it is far too early to evaluate this approach but there is every indication that it is a very promising and positive one.

In Chile, nine months' practical industrial experience in an occupation related to the special field of study is required for full qualification as a technician. In the past, however, graduates of technical schools experienced great difficulty in finding enterprises willing to take them on to complete their qualification. Thus, a large number of technical school graduates found the way blocked to full qualification and hence employment corresponding to their interests and training. The experimental project made a great effort to remedy this situation and, thanks in large measure to the assistance of CORFO, largely overcame the problem for the graduates of the pilot schools. A reform of the content of the practical training is also under way. Previously, qualification was only awarded after the trainee had presented a report at the end of the nine-month period. The type of report resembled those for university academic courses and was therefore not all in keeping with the nature of the practical experience nor its objectives. In the future, evaluation of trainees' performance will be made on a new basis. An initial report will be considered by a committee of teachers from the school and guidance to further study and work given accord-

ingly. These teachers will further consult with those responsible for directing the trainees' practical work to evaluate their performance, ability to adapt to working conditions and the effectiveness of the programme as a whole. The trainee, at the end of the period of practical work, will then submit a final report.

IN-SERVICE TEACHER TRAINING

Without qualified teachers, any such ambitious curriculum reform as that undertaken in the project would remain a dead letter. As a result, the international experts responsible for guiding the experiment placed great emphasis on the upgrading and further education of teachers, particularly in the practical aspects of their special field, in order to strengthen the training component of the new programmes. A number of in-service courses were organized for the faculty of the two pilot schools with quite good results. The participation rates on these courses were very high and there is an undoubted eagerness on the part of the teachers to continue in this way. Until 1974, these courses were organized in co-operation with university instructors but in that year two courses, one for electronic teachers, the other for chemistry teachers, were given at the experimental centre of INACAP, the national institute of vocational training. The courses given in co-operation with INACAP were conducted with only minimum expense and it is very likely that this means of in-service training is the route to be developed in the future.

ADAPTATION TO CHANGING REQUIREMENTS

In the course of the project a continuous effort was made to adapt the programmes in the pilot schools to changing educational, industrial and individual requirements. Several examples illustrate this flexibility. In the past the education given in the technical and industrial schools was terminal in nature and gifted students found themselves with no possibility of higher studies. This policy was designed to halt both overcrowding in the universities and the increasing rate of unemployment among university graduates. The result, however, was to downgrade even further the value of a secondary technical education. In accordance with new national educational policy directions, the project introduced a curriculum of general studies into the pilot schools which, though directed primarily to the requirements of technical professions, will nevertheless provide a foundation for those who so wish to pursue higher studies. A second change, designed to alleviate the problem of educational wastage, was made in the pilot schools at the end of the project. Many entrants to the programmes lacked the interest and aptitudes necessary to complete the course of study and the consequence was a rather high drop-out rate. In the future an entrance examination will be required in order to better guide prospective students towards specialities which correspond to their particular talents. The close relations which have been established with industry have led to further changes in the programmes.

For example, after evaluation of trainees' performance, a number of employers recommended that the physics courses for prospective chemical technicians be strengthened and such a course revision is under way. A two-year course in the field of industrial textiles at La Cisterna was introduced in response to the evident needs of a special group of students: far too many young women were dropping out of the four-year programme after two years, unprepared and unqualified for employment. The new course is designed to train skilled workers with recognized qualifications for the textile industry, thereby meeting both the needs of industry and those of this particular group.

RESULTS AND EVALUATION

When it terminated in 1974, the experimental project in Chile had a number of accomplishments to its credit. The major goals—demonstrating how technical and vocational education as a whole might be strengthened and more closely directed to fulfilling the conditions of development, and broadening the access of women to technical careers—were ambitious ones. Full achievement of these goals required working with a number of exceedingly complex factors—to cite only two of the most obvious, establishing a close working relationship between education, industry and national planning and changing attitudes with regard to the proper education and role of women. Certainly no project limited to two schools and concentrating on revamping programmes and curricula could hope to attain these aims. In the opinion, however, of

all who participated in the planning and execution of the project, much valuable experience was acquired in the six years of its duration and a number of paths for future action cleared.

The most concrete accomplishment of the project was to show how lines of co-operation may be worked out between education and industry at a number of levels, thereby strengthening technical and vocational education and making it truly relevant to the needs of individuals and the society in which they live. Co-operation between the pilot schools and the various branches of CORFO led to both an improvement in the quality of the practical training for middle-level technicians in certain fields and an improvement in employment opportunities for the young people completing their education and training. Furthermore, the collaboration with employers in following up former students provided a strong basis for evaluation of the programmes instituted in the two pilot schools and for their consequent future improvement.

On the surface, the experimental project was less successful in its major goal of increasing the access of women to technical careers through broader technical education opportunities. It is necessary, however, to bear in mind that any change in the role and status of women has far more profound social implications than does educational reform *per se* where principles are generally agreed and only the ways and means need be worked out. Seen in this light, the project has been successful in so far as, while demonstrating the extent of the problem of opening new technical

careers to women, it has indicated that valid solutions may be found.

The project demonstrated very clearly that, though girls may have equal access to technical education for employment in the modern sector, their own attitudes and those of their families militate against their taking advantage of the opportunities offered. Several sets of figures from the final evaluation of the project highlight this fact. Whereas La Cisterna, originally a girls' technical school offering a programme in the traditionally acceptable field of secretarial training, was completely co-educational at the end of the project, Renca, offering programmes in more traditionally masculine fields, in particular electronics, has only a 30 per cent feminine enrolment. As further evidence, there were 1,500 applicants for a traditional girls' technical school as against 600 for La Cisterna. Those evaluating the project concluded that more attention should be given in the future to guidance in the eighth and final year of basic education and a massive effort undertaken to utilize all means of information to change attitudes on the part of parents, the girls themselves, employers and the schools.

The following figures provide a further basis for evaluating the accomplishments and weaknesses of the project. Only those figures relating to the fields of chemistry, textiles and electronics have been used since there has been no difficulty in enrolling girls in the secretarial training programme as this leads to employment widely accepted as appropriate for girls and women. Also, because of changes in the whole focus of the programme and

its introduction at a later date, the figures from the computer programming section at La Cisterna are of little significance at present:

1. *Girls as percentage of total enrolments in 1973 (1969 figures in parentheses).*

La Cisterna: chemistry, 61 (43); textiles, 61 (38).

Renca: chemistry, 28 (54); electronics, 7 (9).

2. *Girls as percentage of total graduates in 1973 (1971 figures in parentheses).*

La Cisterna: chemistry, 55 (56); textiles, 37 (89).

Renca: chemistry, 40 (50); electronics, 11 (7).

3. *Percentage of girls among graduates employed in field of specialization or doing practical work in industry in 1973 (1971 figures in parentheses).*

La Cisterna:¹ chemistry, 58 (50); textiles, 35 (100).

Renca: chemistry, 57 (57); electronics, 7 (0).

If one considers the enrolment figures (the first set) the recruitment of girls at Renca has suffered a decline, while at La Cisterna there has been an improvement. That there has been an over-all decline in the percentage of girls as compared to boys completing the programme is indicated in the second set. The third set of figures, however, shows a reasonably positive trend in all programmes except textiles as regards employment of women in their special fields. On the whole these figures do not show a radical improvement in the access of the women graduates of the two pilot schools to technical careers. However, a closer look at the figures for the chemistry programme reveals a positive element.

1. The 1973 figures for La Cisterna apply to those engaged in required practical work.

In 1973, at La Cisterna, girls made a very good showing as 55 per cent of the graduating class, and formed a respectable portion of the same class at Renca. If these figures are compared with those for 1973 taken from the third set of figures, girls have done reasonably well in terms of their employment: only 55 per cent of the class graduating from La Cisterna, they formed 58 per cent of the group of graduates employed on practical work; even more impressive, although forming only 40 per cent of the graduating class at Renca, they nevertheless accounted for 57 per cent of the group employed in the special field. From these figures, it may be concluded that given equal opportunities for enrolment in a programme (which, to be sure, is not generally identified with a strictly masculine profession) and placement in employment after completing a course, girls' performance both in studies and on the job is equal to that of boys. Further, the educational investment appears equally valid for girls and for boys. The figures are even more impressive and demonstrate the value of the approach taken in the experimental project when compared with over-all figures for 1973 which indicate that only 10 per cent of technical school graduates in Chile were at that time employed in the occupational field for which they had trained. The figures gathered as a result of the evaluation of the project are certainly not conclusive but they are promising enough to encourage further efforts along the same lines.

The evaluation of the project included an inquiry concerning employers' opinions of the graduates of the two pilot schools. This showed that the

girls trained as chemical technicians were working in a variety of industries—pharmaceuticals and cosmetics, fertilizers and pesticides, the chemical laboratory of a metallurgical industry. Furthermore, employers attested to the high quality of the young women's work and their ability to adapt to the working situation. These initial views further support the evidence of the figures, namely that the return on the investment in girls' technical education for employment in the modern sector is on a par with that of boys.

The attitudes of women students in the pilot schools add weight to these findings. As another aspect of evaluating the project, a questionnaire was circulated among women fourth-year students at both pilot schools during the 1973/74 academic year. This questionnaire was designed to evaluate their attitudes towards the programme of study and their employment prospects and to elicit suggestions for improvement in the programme. The responses of girls enrolled in the chemistry programme showed over-all satisfaction with the course of study. Very significantly, they felt that they enjoyed the same opportunities as men for employment in their fields and that it was no easier for men than for women to find such employment. After four years, in a co-educational programme, they exhibited a rather high degree of self-confidence, which on the whole seems well founded.

The experimental project has demonstrated that given equal opportunities, treatment and encouragement, girls are capable in technical fields, may enter technical professions on an equal basis with

boys and develop the necessary confidence in their abilities.

By their intensive recruitment into programmes leading to employment in the modern sector and through the co-operative efforts of education and industry, technical education and related careers may be significantly broadened. The major problem is to find means of encouraging more girls to take advantage of these opportunities. The solution involves, among numerous other elements, exploration of more effective means of providing girls with appropriate educational and vocational guidance as well as ways of changing attitudes in the community.

In continuing efforts to reform education in Chile and to fully integrate women into the economic and technological development of the country, the project will have served as a guide both to effective action within the school system and to constructive approaches for removing the more complex obstacles, rooted in basic schooling and society at large, hindering open access of girls and women to technical careers.

Part II Problems and approaches to action

The climate of opinion

Profound change can only be wrought in a favourable climate of opinion. The unwillingness of many men and women to accept, and work towards, equality in every facet of life is the greatest obstacle to improving the status of women. All three experimental projects described in Part I confirmed this proposition with regard to equal educational and employment opportunities for women. Aware of the problems which would be encountered from the beginning, those responsible for designing and implementing the projects were forced to deal at each step with negative attitudes on the part of both the community at large and prospective participants. In Upper Volta, field staff sent out to enlist the participation of villages in the project, had first to overcome the suspicions of the men, to explain the goals of the project and to demonstrate how the education of women would benefit the community as a whole before they could address the women as a group. In Nepal, interviews with parents in the villages showed that many considered the education of girls to be a worthless investment and feared that sending girls to school would disrupt the patterns of traditional life. All

three projects, then, had as a major underlying concern the creation of a favourable climate of opinion which was a pre-condition for attaining their specific goals and the extent to which they achieved this is a good measure of their over-all success.

Any attempt to change the status of women elicits the expression of deeply rooted opposition, and attempts to create equal educational and better employment opportunities are no exception. The arguments justifying inaction are numerous but usually based on a certain conception of womens' traditional role and a fear that if this changed there will be a breakdown of moral and cultural values. It is easy to scoff at such arguments as retrograde or contrary to generally accepted principles of fundamental human rights. The attitudes expressed are none the less facts which must be dealt with and, if possible, changed. In some societies it is feared that promoting literacy among women will lead to dire consequences. In others, primary and secondary general education for girls is accepted as natural, but education for employment or for the exercise of a profession is regarded as useless and perhaps undesirable. Where higher education is generally thought appropriate for those women who wish to avail themselves of it, only certain fields are considered suitable. In societies where many if not most women are employed, they do not enjoy the same opportunities for advancement and are not prepared through their education and training for higher status jobs: it is acceptable for a woman to be a teacher but not an administrator, a laboratory assistant but

not an engineer, a secretary but not an executive, a field labourer but not a tractor driver or a farm manager.

Whereas the expansion of educational and employment opportunities for men is accepted as a major road to progress, this is not everywhere the case for women because of their family role and the fact that they are viewed both as examples and repositories of traditional values. These attitudes towards women and their education, while indeed providing a special and necessary place for women in society, nevertheless serve to keep them in a subservient position with limited horizons. They effectively prevent women from fully participating in or benefiting from, much less directing, the development process. The problem is, then, to demonstrate that the exclusion of half the population of a given country from the development process (and moreover that half which has the most direct influence on the attitudes and thinking of future generations) will gravely compromise development.

Education taken in the broadest sense is one of the major, perhaps the major, channel for changing the climate of opinion concerning the creation of equal educational opportunities for women and an equal chance to participate fully in the larger concerns of their societies. In the three experimental projects, education has been both a means of implementation and an end. Thus, on the one hand, the projects have been concerned with broadening in specific ways the educational opportunities available to women and at the same time have used education to create attitudes which not only allow women to take advantage of these

but also positively encourage them to do so. Each demonstrates in its own way the extent of the problem as well as possible approaches to changing these attitudes.

All three projects approached the problem of changing attitudes on two levels: on the community level both prior to and during implementation, and on the level of those girls and women participating in the project.

One of the central objectives of the sociological surveys carried out in the projects was to determine the attitudes towards new educational opportunities for girls and women on the part of the various communities to whom the projects were addressed. In Nepal and Upper Volta, attitudes varied considerably from group to group in the rural areas, depending on the social constitution and cultural traditions of the particular village or group of villages concerned. As a result of these studies, approaches towards creating a favourable climate of opinion varied within each project. In Upper Volta, for example, most of the villages in Kongoussi possess a rather rigid patriarchal structure in which women enjoy few rights while in the Pô zones, women enjoy a relative degree of freedom and independence. In Kongoussi, therefore, a comparatively long initial information campaign addressed to the men in the villages was carried out prior to the organization of informal classes in community development for women. In Pô, on the other hand, direct contact could be made with the women and the programme organized within a very short time of the decision to begin implementation in that zone.

In both Nepal and Upper Volta, extensive personal contacts between international experts and counterpart staff, on the one hand, and the local authorities and men and women of the villages, on the other, proved the most effective means of gaining and sustaining support for the projects. In Nepal, the most successful recruitment of candidates from rural areas for primary teacher training was achieved as a result of journeys made into the countryside by recruitment missions. These missions spoke with village leaders, pointing out the benefits to be derived from enrolling girls in school and how this might be best achieved if women primary teachers were trained for the rural schools. The missions emphasized that the girls, once trained as teachers, would be returning to the villages to aid in the development of their own communities. It was further necessary to assure parents that during the teacher training programme the young women would be provided with proper boarding facilities. In the first year of the project, before this method of personal contacts for recruitment was used, the number of young women recruited from rural areas to participate in the teacher training programme fell far short of stated goals. After the missions began their work, the goals for each year were virtually achieved. This method of recruitment has proved so valuable that, in the extension of the experiment in primary teacher training for women throughout the country, heavy reliance on recruitment missions has been strongly recommended by those evaluating the results of the project. Personal contacts with a view to changing attitudes in rural areas,

though highly effective, nevertheless require far more staff than were or are available in either Nepal or Upper Volta. Other projects which might be undertaken to create new and more nearly equal educational opportunities for girls and women in rural areas might well profit from this experience. It is necessary from the beginning to provide for sufficient staff not only to make initial contacts but to follow them up throughout the duration of the project.

The project in Chile, carried out in a heavily populated urban area, was concentrated not so much on creating a climate of opinion in the community to encourage the enrolment of girls in technical education programmes as on cultivating positive attitudes among prospective employers towards hiring girls and young women having completed the appropriate training. This approach was based on the supposition that if girls completing programmes at Renca or La Cisterna could find well-paid employment in interesting jobs corresponding to their training and qualifications, other girls would more easily follow the example of the experimental groups and would be encouraged to do so by their parents. Thus, within the lines of co-operation worked out with CORFO, the project succeeded in placing a high percentage of the girls completing the programmes in appropriate employment through contacts with individual employers. Again, such an approach, though of proved value, requires a large staff and time-consuming initial contacts and close follow-up action.

There appears to be little doubt that the mass

media are a valuable means for influencing attitudes and ways of thinking in contemporary society. The possibilities offered by the mass media were explored in all three projects, although on such a small scale that concrete results are difficult to measure at the present time. In Upper Volta, special radio broadcasts were used as a means of reinforcing the adult education classes for women given in the villages, and were treated as an integral part of the project. In Nepal, several special radio programmes concerning the project were broadcast but a concerted effort is now planned to create a dramatic radio serial revolving around a woman teacher in a village school who is trained in the project. Rather than using the radio, the project in Nepal has until now concentrated on developing and distributing printed information and posters to the local communities, some of which material has been produced by the young women in the teacher training programme. Although little was done in Chile to exploit the mass media so as to promote the access of women to technical careers, recommendations concerning the future extension of the project to other schools have strongly favoured giving more attention to this means of communication.

The use of mass media presupposes general availability of radio receivers while the use of printed materials naturally presupposes at least a minimum level of literacy. The mass media will therefore have a more immediate impact in an urban setting. When directed to rural areas, there must be a concomitant effort to provide access to the media, as has been done in Upper Volta. There, radio

receivers have been provided to the villages, and plans are being formulated to develop newsletters directed to the newly literate.

On the whole, the results of these two major approaches to changing community attitudes towards broader educational opportunities for women have been positive. In an investigation undertaken in the villages as part of the extensive mid-term evaluation of the project in Nepal, residents of villages with women primary teachers expressed their satisfaction with these teachers and felt that parents were less hesitant to send their daughters to school with a woman teacher present. A man from the village of Boulenga in the Kongoussi zone of Upper Volta pointed proudly to the fact that the women in his village participated enthusiastically in the project and noted that what they had learned served to make life more agreeable for everyone in the community. A reporter making a tour of some of the villages involved in the project also noted a considerable change in the attitudes of the men who appeared more and more convinced of the value of the project. The certificates delivered by several employers in Chile to girls trained in the chemical technician programmes of the two experimental schools expressed complete satisfaction with the quality of the girls' preparation and their ability to perform their jobs well.

Whereas community support was one of the basic preconditions for successful implementation of the three experimental projects, the projects were specifically directed to changing the attitudes of the girls and women participating. All three projects served to make the girls and women studying

in the experimental institutions or attending informal classes or brief training programmes aware of their potential to contribute to development through their own education. The ways in which education helps to heighten women's awareness of their own potential and gives them confidence in its fulfilment, and the extent to which the three projects succeeded in achieving these results, are demonstrated by the attitudes of the participants themselves. The responses to the questionnaires circulated among fourth-year women students at Renca and La Cisterna in Chile, clearly revealed the girls' confidence in their own abilities at the end of their preparatory education and training. The teacher training programme in Nepal emphasized the role which future teachers would play in development and particularly their role in encouraging increased enrolment of girls in the schools. Follow-up investigations of trained teachers posted in villages showed that they felt themselves to be contributing to the attainment of these objectives. Impressions gathered from some of the participants in the Upper Volta project further confirm these tendencies. The members of a village literacy class in Kongoussi noted the concrete results of their education in the improved health of their children and improved conditions of living, and expressed their desire to continue learning. A woman leader from a village in Banfora noted the desire of her village to participate fully in the programme because of the results already obtained in other villages which began participation in the project several years before.

Although it must be borne in mind that all

three projects were experimental in nature and implemented on a relatively limited scale with limited resources, the approaches used to change attitudes both in the community as a whole and among the women and girls participating may be considered promising. Certainly there have been no miracles but on the other hand there has been appreciable progress.

In the light of the three projects, it is clear that all efforts to broaden educational opportunities for girls and women and to encourage them to take advantage of these must include a conscious and continuing effort to inform the community at large, to gain its support and to sustain positive attitudes. This holds whether the new opportunities are opened within the formal education system or outside it. Furthermore, the education programme offered to girls and women must aim at heightening awareness of their possibilities and instilling confidence that they will be able to perform creditably the roles for which this education is preparing them. The approaches used in the projects—personal contacts, the mass media, relating the programmes of education to womens' role in development—are all promising. Certainly much remains to be done in exploring and experimenting with the possibilities offered by the approaches used in the three projects, as well as in devising other effective approaches. The approaches used, with their obvious limitations and difficulties in certain contexts, nevertheless point to ways in which a climate of opinion might be created favourable to full equality of opportunity for women to be educated, employed and to participate in development.

Education for participation in development

Many countries are at present faced with the enormous task of expanding their education systems in order to make basic education available to groups of the population heretofore excluded, while at the same time creating new structures and content responsive to development requirements. As these reforms are undertaken, special measures are required to ensure that women will benefit from them and be prepared to participate fully in the development process.

Any programme addressed to integrating women in development in accordance with the country's over-all development priorities involves dealing with a complex set of factors. Broadening women's educational opportunities is not just a matter of creating new educational facilities or providing access to those already established. The situation of women in virtually all societies poses special problems when it comes to creating equality of opportunity in fact as well as in principle. Programmes directed to equipping women and girls for participation in the development process through education must deal with the realities of the situation and attack the fundamental areas which serve to

keep women entrenched in a lower status. Making education relevant to the requirements of development as well as to the requirements of women in a specific context depends upon a sound definition of the areas of greatest need as well as full utilization of the possibilities offered by both the school system and informal education structures. The projects in Upper Volta and Nepal illustrate pragmatic approaches to integrating women in rural development while that in Chile indicates ways of assuring women's participation in industrial development.

Education for rural development requires action both among the adult population and within the schools. The development of informal education programmes for adults is in many respects a prerequisite for expansion of the formal education system: parents must be willing and able to send their children to schools and the economy must be able to bear the expense entailed in expanding the system to rural areas. Given the fundamental role of women in sustaining the village economy in many areas of the world, it is essential, if progress is to be made, to develop programmes directed to their special requirements. As was seen in the case of Upper Volta, improvement in the standard of living through informal education was a precondition for even a basic literacy programme and was therefore given priority. Further, the literacy programme was designed to reinforce this community development education. Although not specifically stated in the original objectives, the project in Nepal also became concerned with the education of women for community development.

In those areas, as for example in some zones of Upper Volta, where it is primarily women who cultivate the fields, they must be included in all efforts, whether in the schools or the agricultural extension services, directed to the development of education programmes in modern agricultural techniques. Failure to do this, as the experience of many countries shows, acts as a strong brake on rural development as a whole. Where women are the primary cultivators little progress is made because of their lack of training, and where only men have been trained in improved agricultural techniques, including the use of mechanical equipment, women, deprived of the means to make even this traditional contribution to the economy, lose in status.

In the course of both projects, those responsible undertook to develop informal education programmes closely and realistically related to the needs of rural women in order to promote the long-term goal of equal educational opportunities for women while at the same time enabling them to contribute to rural development.

The projects in Upper Volta and Nepal further demonstrate two aspects of effective action undertaken within the structures of formal education to promote the participation of girls and women in rural development: curriculum development and the provision of certain necessary physical facilities.

In Upper Volta, emphasis has been placed on curriculum development within the primary schools and post-primary sections preparing girls to contribute to development within a rural or semi-rural environment. Instruction in practical

skills related to improved agricultural techniques and methods of child care and domestic economy form a major element of the new curriculum. This programme is closely related to the child's environment in that it is directed to improved utilization of the resources at hand while at the same time developing skills and knowledge which will improve this environment. Although this is certainly not a means of preparing girls for skilled employment, it is an effective means of preparing them to contribute to the development of their communities and to attain a measure of economic independence. In training primary teachers in some elements of practical education for girls in rural areas, the project in Nepal is preparing the ground for the same type of approach.

There is of course a danger in developing special practical programmes for girls, in as far as this may serve to reinforce existing discrimination as to the role and status of women. In so far as possible, such distinctions should be avoided even, and perhaps above all, at primary level. A number of studies show that attitudes concerning the appropriate roles of men and women are inculcated very early indeed. Furthermore, as shown in the sociological studies in Nepal, the roles are often assumed at a very early age: the household chores and responsibility for younger brothers and sisters have prevented girls from attending school and these duties are considered essential by parents. In such situations it would be unrealistic to neglect the training of girls in more efficient and better ways of household management and child care. Only with this type of training will they, and eventually their

daughters, be free to take advantage of the educational opportunities available.

Despite the special approaches required and the necessary element of home economics education for girls in rural areas, girls and boys may easily follow the same course of studies in the areas of practical agriculture. A conscious effort to develop such programmes is one way of mitigating the distinctions concerning content of education which at present appear necessary.

In developing the practical element of the general education curriculum for rural areas, attention should also be given to the rudiments of commercial education and skills for developing home industries. If particular emphasis is placed on these aspects, girls will be better prepared to make an independent contribution to family revenues, while at the same time earning in a way acceptable to traditional society. In many parts of the world women play a large role in rural commerce, selling produce and products of home industries in the local markets. An exposure to basic book-keeping and marketing procedures in their general education would enable them to undertake these small-scale operations more efficiently. Preparing girls to produce marketable goods at home, based on traditional craft skills, is yet another positive approach. There is little doubt that the development of skills for self-employment, whether management of a small farm or producing marketable goods, is one of the essential prerequisites for rural development in many areas and the formal education system offers a channel for developing such skills in future generations. If progress is not to be slowed, a

conscious effort should, from the beginning, be made to integrate girls into this process.

The project in Nepal demonstrates that even where basic schooling is available, special measures with regard to the provision of physical facilities are required to enable girls in rural communities to attend. Special emphasis was placed on appropriate boarding facilities for women. Not only were these essential for implementing the teacher training programme but, on further study, they seem essential for expanding recruitment of girls from the rural areas. Without the provision of boarding facilities at some centrally located secondary schools, rural girls will continue to have limited opportunities for completing their secondary education up to school leaving certificate level, the level now required for entrance into the teacher training programme.

Provision of child care facilities at village schools has also been tried out so that girls may bring along the younger children for whom they are responsible.

The experience acquired in Upper Volta and Nepal illustrates the necessity for a close analysis of the situation of rural women with regard to the priorities of rural development in order to determine the preconditions for their participation in education programmes and the appropriate content of these programmes. From this experience it may be concluded that viable education programmes both within the schools and in informal classes should be directed to instructing women in ways of ensuring the health of, and an improved standard of living for, their families, as well as preparing them for contributing more efficiently to the rural economy. At the same time, means must be

worked out to overcome the sheer physical barriers to school attendance or participation in informal classes.

Preparation to enable women to contribute to industrial development poses problems which differ considerably from those arising in a rural context. Youth unemployment is one of the greatest problems confronting most developing countries and many industrialized ones, and women's unemployment is even more crucial. As a result of custom and lack of training, women are for the most part to be found at the very lowest echelons of the labour force or employed in occupations considered properly feminine: dress-making, child care, social work and, in some countries, teaching. In any occupation staffed primarily by women, salaries are on the average lower than in those fields reserved for men. Where such occupations are the only possible fields of employment for women, supply often outstrips demand. The whole problem of inadequate employment opportunities for women is further aggravated by the fact that in many countries most women remain economically dependent and have few prospects of acquiring independence.

Education, if properly related to the realities of the working world and the eventual demands of the labour market, may serve as an effective channel for improving the economic and employment status of women. As countries engage in reforms of technical and vocational education, a special effort should be made to integrate girls from the beginning in these reforms so that they may enjoy the same opportunities as boys within the formal education system.

A fairly well-developed industrial sector presupposes generalization of basic education, to which girls, at least in the urban areas, usually have equal access. In this case, technical and vocational education, though not necessarily fully adapted to the requirements of the developing economy, at least exist so that the problem is to create fully coeducational institutions, converting institutions already in place and recruiting and admitting girls to the full range of programmes on a basis of equality with boys.

The provision of equal opportunities for girls and women within technical and vocational education (the central objective of the project in Chile) is of course the most obvious initial step towards equal employment opportunities in a country in process of industrialization. Not only must programmes be opened to girls but they must be recruited in the first place, and after they have achieved qualification, employers must be willing to hire them. The project in Chile provides ample evidence of the necessity for such action. As a result of the project, it was concluded that real change would only occur if provision were made within basic education for a strong vocational and educational guidance programme directed to girls, and if they were informed of the educational and eventual employment opportunities available and encouraged to take advantage of these. Such guidance is particularly important where, in the normal course of events, it would never occur to girls to enrol in an industrial technician training programme. The project also demonstrated the necessity of working closely with prospective employers

in designing education programmes leading to employment in industry. Little progress will be made if discrimination persists against hiring women outside traditional sectors.

New educational opportunities for women, leading to employment and economic independence, should be an integral part of over-all plans directed to improving the status of women and promoting their equality through education as well as of those for industrial development. The low status of women in many societies is reinforced by their economic dependence and work in poorly paid positions. Industrial and economic development requires the recruitment and training of a skilled workforce. In the interests of both equity and full utilization of potential human resources, every effort should be made to integrate women into this aspect of the development process.

If any programme of development, whether industrial or rural, is to progress with some rapidity, the women must be involved in the process. If half the population remains ignorant and in a position of inferiority, and therefore on the fringes of development, all will suffer. The three experimental projects demonstrate possible approaches to educating women for participation in development, but much further exploration of the problem is needed both on a general plane and in terms of the conditions existing in particular countries. Most countries are now rethinking their systems of education with a view to creating a whole new set of educational structures to implement the principle of lifelong education. As these reforms are formulated and implemented, there are numerous

possibilities of offering new opportunities to women within these more flexible structures. It is a question of how women may best be prepared to contribute to development and of engaging in action directed to improving their opportunities concomitantly with consideration of the over-all reform.

Women as agents of educational change

If educational opportunities for women are to be broadened and to prove of value, girls and women must be prepared to act as conscious agents of educational change. Determination of the educational objectives of most societies generally remains in the hands of men. Women have had little say in the educational decision-making process, just as they have had little influence in making any of the major decisions affecting society as a whole. In some countries, as general education has become compulsory and universal, teaching at the lower echelons has been confided to women. Teaching young children was considered an appropriate profession for a woman, and perhaps most important, increasing numbers of teaching staff were required to implement programmes of universal primary and, in many countries, universal lower secondary education, thus necessitating the recruitment of women to meet growing staff needs. Salaries in the lower echelons of the teaching profession primarily occupied by women, have been kept on a level inferior to those of the teaching profession as a whole or of other professions requiring an equivalent amount of schooling or other forms of

education and training. Outside the teaching profession, women have held relatively few positions as educational agents in the formal sense, e.g. agricultural extension agents, instructors in vocational training programmes and industry. Yet, in the informal sense, women, by virtue of their traditional role in the community, are perhaps the greatest influence on education and on attitudes towards education. Thus, on the one hand, profound educational change is inconceivable without the full participation of women; on the other, if we are to arrive at equality of opportunity for men and women alike, women must be prepared to take an active role in determining the directions of change and be given full opportunity to fulfil this role.

The three experimental projects were designed to prepare women to act as agents of educational change on two levels. On the first level, women who have availed themselves of new educational opportunities serve as an example to other women and encourage them to follow in the same way. These young girls and women demonstrate that, in their private roles, women may aspire to and attain certain goals, the avenues to which were previously closed to them. On the second level, women have been trained in these projects to act as agents of change in their public roles as teachers, literacy instructors, or leaders in the community.

The graduates of the experimental schools in Chile will serve as examples of the benefits, in terms of employment opportunities, to be derived from technical education in fields previously not widely open to women. In Upper Volta, the adult educational programmes in community develop-

ment directed to village women serve much the same purpose. The fact that village women in Pô were aware of the positive results in villages already participating in the project is evidence of the effect as an example which women, having benefited from certain educational programmes, may have.

The teaching profession has often acted as a brake on radical change within the formal education system. The willingness of these agents of education to participate in and initiate change depends in great part upon the preparation they receive for the exercise of their profession. In Nepal, very few women, and even fewer in rural areas, were trained as primary school teachers. Encouraging women to enter this profession seemed the best way of increasing the enrolment of girls in primary schools. This approach appears to have been successful. The mid-term evaluation of the project showed that those areas where women trained under the project were teaching had a considerably higher proportion of girls enrolled in the primary schools than did those areas with very few or no women teachers. In Upper Volta, the introduction into the primary school curriculum of a practical component for girls involved the in-service training of primary school teachers as well as a redirection of the regular primary teacher training course. The teaching profession offers to women an attainable and most important plane from which to act as agents of educational change. However, aspiring only to positions on the lower level of the education system, that is in primary and lower secondary education, will not lead to the realization of the full potential of women as

agents for change nor will it serve the quality of the teaching profession as a whole. Women as well as men should be involved at all levels if full equality is to be reached throughout the education system in terms of the teaching profession itself. In all programmes directed to preparing women for the teaching profession this goal of equality should be kept in mind, particularly in conjunction with programmes designed to broaden the opportunities of girls within the educational system. When opening technical and vocational education to women in order to prepare for technical careers, parallel efforts should be made to recruit and train women teachers and instructors in these areas.

Another significant opportunity for women to act as agents of educational change is provided within literacy programmes directed to rural areas. In these areas illiterate women often far outnumber illiterate men. In Nepal, it was not unusual to find a literacy class composed of ten women to two men. Since women form the majority of illiterates, women instructors, both through their training and through their example, may be extremely effective in both motivating and actually bringing about change. Again in Nepal, the importance of women's participation as agents of literacy in rural areas was recognized in the proposed development of an extracurricular course within the formal primary teacher training programme designed to train teachers in adult literacy instruction. As noted in the description of the project, special courses have been instituted to train literacy instructors for the villages and priority for recruitment was given to practising women primary

school teachers. Under the project in Upper Volta, women instructors were trained for the literacy programme which itself was closely related to the basic educational needs of village women.

The projects in Nepal and Upper Volta also illustrate how women may be trained on a more informal basis to take the lead in motivating other women in their communities to take advantage of new educational opportunities. In both, courses were organized for village women so that they might share their experience upon return to their homes. If the objectives of any new educational programme are accepted by women prominent in the affairs of their own community and respected by the community, the programme itself has a far greater chance of success, and in Upper Volta this became one of the major thrusts of the project. The women trained in the village leadership courses were introduced not only to the content of community education for women as conceived under the project, but were also initiated into techniques, including those of group leadership, which they might use to actively encourage participation of their neighbours in the programme. Such approaches as those used in both Nepal and Upper Volta attack some of the fundamental obstacles hindering the most disadvantaged women from taking advantage of the educational opportunities available to them, in as far as women with an intimate knowledge of these obstacles were trained as agents of change.

The projects demonstrated a large degree of flexibility in the recruitment and qualifications required of candidates for training. Midway in the Nepalese

project, with the implementation of the new education plan, all candidates for primary teacher training were required in principle to have obtained the secondary School Leaving Certificate. Had this requirement been rigidly adhered to, it would have been virtually impossible to recruit girls from rural areas for the programme while future teachers from urban areas would have been extremely hesitant to take up work in an unfamiliar rural environment. As a result, candidates for the programme were recruited with below-standard qualification, but provision was made to enable them to complete this qualification which they had had no opportunity to obtain. A comparison of the programme to train village leaders in Nepal and that in Upper Volta provides yet another example of how a project must be closely related to the realities of the situation. In Nepal, a literacy qualification could be required for the training course while in Upper Volta participants in the course were elected by the women in their village.

Progress in creating new and broader educational opportunities for women also requires a conscious effort to recruit women already possessing the necessary qualifications for positions of leadership at all levels of education. In the evaluation of the project in Upper Volta, it was noted that one of the obstacles to thorough implementation of the project and its eventual extension throughout the country was the penury of women in the national services. Countries undertaking action to improve the situation of women, in this particular case with regard to education, should therefore, if this action is to be effective, at the same time engage in an

intensive talent search to involve qualified women in planning and carrying out the effort. As with any group which has been the object of direct or indirect discrimination, women must be given the opportunity to fill leadership positions in order to bring their special experience to bear on the improvement of the situation in which the majority of women find themselves.

Three levels upon which women may act as examples and agents of educational change have been noted: in planning and decision-making positions, as active agents in all levels of education, and as beneficiaries of the broader educational opportunities which are rightfully theirs. In any overall programme devoted to the creation of equal educational opportunity for girls and women these three levels should be kept in view and action on all three planes co-ordinated. Furthermore, throughout their education girls should be made aware of their potential as agents and examples of change so that they will be motivated to seek and fulfil this role. The evidence of the participants themselves in the three projects previously cited illustrates the effectiveness of a conscious effort toward this end. New primary teachers in Nepal were very aware of the role they were to play in encouraging increased enrolment of girls in the schools. The village leaders and midwives trained in Upper Volta were conscious of their responsibilities in the development of their communities. The girls trained in the experimental institutions in Chile expressed confidence in their ability to obtain employment and advance in the occupational fields for which they had trained. The

results of the projects strongly suggest that the effective broadening of educational opportunities for women requires conjoined action on several levels, even should this action be limited to a particular sphere or area of education, to ensure that women are prepared to act as agents of educational change.

Conclusions

Conclusions

During the past decade, Unesco has promoted equal educational opportunities for girls and women on the assumption that, in the long run, education will prove to be the most effective channel for achieving equality between men and women and ensuring the full participation of women in development. The ultimate objective will not be achieved in the near future. As has so often been observed, efforts to change the situation of women in any society touch upon a very sensitive domain concerning the cherished values of that society and, in consequence, elicit deep-rooted opposition. Although the law in most countries no longer discriminates against women, both subtle and overt discrimination still exists in many forms. To uproot this discrimination, to change the attitudes held by both men and women which sustain it, requires a long process of education in the broadest sense.

The three experimental projects were initiated and implemented in the light of these ambitious objectives. Each project, dealing on a comparatively modest scale with the most evident lacunae in women's educational opportunities in

the country concerned, nevertheless contributed in a concrete way to the eventual achievement of the broader goals. The three projects are evidence both of what may be accomplished in a context of international co-operation and of national determination to seek means of putting into practice generally accepted principles.

Despite areas of weakness, despite certain failures, the three projects may on the whole be considered successful both for the light they have shed on several problems involved in any attempt to broaden women's educational opportunities, and for the actual results achieved.

Each project in its own way addressed itself to three general problem areas with which any action to promote the education of women must deal: an unfavourable climate of opinion, education irrelevant to integrating women into development, and the penury of trained women to act as agents of educational change. A comparison of the action taken and the results achieved in all three cases indicates possible approaches to increasing educational opportunities for women in various domains and under various circumstances—approaches which have been tested through experience.

From the experience, both positive and negative, acquired in the course of the three projects, it may be concluded that there are three prerequisites for successful operational activities to broaden educational opportunities for girls and women. These may be summed up as comprehensiveness, flexibility and adaptability to an existing situation.

Although an experimental project may be modest in its goals, it must nevertheless be based, from

its inception, on a comprehensive approach. Where this approach was not taken initially in the three projects under consideration, it was developed in the later stages, or recommended for the future. In Chile it was realized at the termination of the project that little would be accomplished by admitting girls to new technical and vocational education programmes without a concerted effort of educational and vocational guidance at the end of basic education. Those responsible for the project in Upper Volta pointed to the need to have women in positions of government and local leadership for full implementation of the project. Although the project in Nepal was directed to primary teacher training, in the later stages the major concern has been the recruitment of suitable candidates and the devising of means to prepare such candidates from rural areas.

The question of which aspect should be dealt with first cannot be positively answered. From the experience of the projects, it would seem that the best approach is to decide on a general priority area and, from the beginning, attempt to implement a programme on several levels: developing an educational programme in the target area chosen, providing for recruitment to the programme, providing for recruitment or training of women leaders to implement the programme, and, throughout, constantly cultivating a favourable climate of opinion toward the objectives of the project. Given the inevitable complexities of the situation of women, all efforts to promote equal educational opportunities should include, in addition to the education authorities, the collaboration of

all public and private agencies possibly concerned. The establishment of such lines of co-operation and the creation of structures through which it may function was cited in all three projects as contributing considerably to positive results.

Flexibility appears to be the second essential for the successful implementation of an experimental project. Despite a careful delineation of objectives and thorough background work, it is impossible to foresee all possible factors from the beginning. Every effort should be made to allow for possible changes of direction or focus in accordance with changing circumstances, or as more effective modes of implementation become evident. The three experimental projects demonstrate the need for such flexibility, in that during their implementation various adjustments and modifications were made as required. These changes were based on continued evaluation of the effectiveness of the project. Thus, from the beginning, not only are structures for evaluation required but built-in leeway for change based on this evaluation is also necessary. Furthermore, the value of experimental projects resides in the fact that it is possible to maintain a certain controlled flexibility when working within a comparatively limited framework. Hence all three projects were designed to be a prelude to a general reform leading to new educational opportunities for women, this general reform being worked out on the basis of the experience acquired.

Adaptation to an existing situation forms the third major requirement for effective action. Although it is impossible to avoid bringing preconceived ideas to the formulation of a project, the

specific objectives chosen and the means of implementation, both initial and developed in the course of the project, must be carefully related to the realities of the situation. This close adaptation requires thorough preliminary study to define the parameters of the situation with regard to women. It further requires careful insertion of the project in the over-all development context of a particular country, both the prevailing context and the probable future context. Although experience acquired in other contexts may be a useful and even invaluable guide, each country and, within the country, each different group, requires a creative approach directed specifically to that situation. While directed to common general goals, the three projects demonstrate this necessity in their different objectives and varied modes of implementation.

The projects have had an impact on a number of levels. In terms of international policy they have corroborated the value of experimental work in the field as a means of working toward improving the status of women through the channel of education. They have further served to influence general policy in that when the three projects were initiated in the late sixties, it was thought that working towards equal access of women to education would eventually assure equality in this field. However, as the projects broadened their focus over the years to deal with more complex factors, they revealed the necessity for a broader approach on international policy level to the whole problem of bringing about full equality between men and women and for assuring the full participation of women in development. The projects were also

intended to illuminate and illustrate possible approaches to dealing with problems of regional interest and have provided a major topic for several regional seminars. Chile has participated in two such meetings, the 1969 expert seminar and more recently in 1974, one held in Colombia on technical education for women in Latin America and the Caribbean. Also in 1974 a seminar, with eight French-speaking West African countries participating, was held in Upper Volta to examine problems of women's education and community development. A similar regional meeting revolving around the Nepalese project is planned. The three projects, through exchange of information and experience, have had, and will continue to have, a concrete impact outside the boundaries of the individual country.

The projects were a reflection of new directions in national policy at the end of the sixties. They have furthermore had an impact on the evolution of this policy over the last decade. The objectives of the projects have in all three countries been incorporated into general national development plans and particularly in those chapters concerning education.

The creation of a favourable climate of opinion towards new educational opportunities for women may perhaps be cited as the outstanding achievement of the projects. As stressed in this study, the women participating have become more conscious of their own potential and more confident of being able to realize it. Their husbands, fathers and colleagues have been encouraged to change their own previously held views. The ultimate goals will only

be achieved when such positive attitudes on the part of men and women alike become the generally held values of the societies in which they live and work.

Creating new educational opportunities directed to ensuring full equality between men and women and the full participation of women in development must be seen in the context of educating society as a whole. Each of the three experimental projects, from different standpoints, has demonstrated this necessity. As countries undertake educational reforms to answer the broader needs of society and the groups and individuals which compose it, as they begin the process of erecting a system of lifelong education, a special effort should and must be made to include women in the process, if lifelong education itself is to become a reality.

With a decade of experience upon which to build, Unesco is now better prepared to design more effective programmes for assisting Member States in their efforts in these directions. If the three experiments in equality provide guidelines for national and international action in similar circumstances, if they provoke exploration of new paths toward equal educational opportunity for women, they will have performed a valuable service and opened new prospects for the future.



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